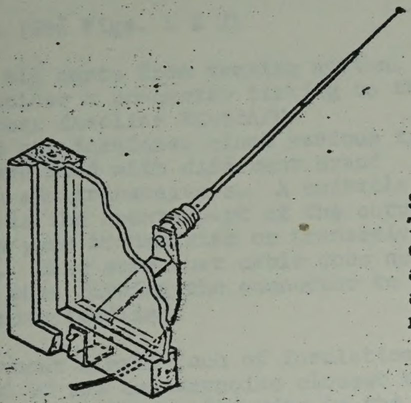
PORTABLE WHIP ANTENNA



MODEL 370-10
2 - 40 METER ANTENNA AND CB FREQUENCIES

Simple installation for Apartments, Town Houses, Trailers, Boats, Hotels, etc. The Model 370-10 has proven its ability to provide a quick and dependable antenna system when regular antennas cannot be used.

The Model 370-10 has also found application for emergency communication work when conventional antenna systems have been put out of service through storm damage, etc. When adjusted properly to your operating frequency, VSWR is 1.1:1.

SPECIFICATIONS:

Power Rating	SSB — 360 watts PEP
	CW — 360 watts input
Frequency Coverage . . .	40, 20, 15, 10, 6, 2 and CB Bands
Whip Extended	Maximum length - 57 inches
Whip Retracted	Minimum length - 23 inches
Weight	2 pounds (complete with 10 meter coil, 15 meter coil, 20 meter coil, 40 meter coil, CB coil, shorting strap for 6 and 2 meters, antenna whip, insulator, bracket with mounting stud, coax, and counterpoise).

BARKER & WILLIAMSON, INC.

BRISTOL, PENNSYLVANIA 19007

nstallation (See Figs. 1 & 2)

Remove all parts from packing carton. ttach and solder a connector fitting to the nd of the coax feedline RG-58A/U. Connector is not furnished since various type connectors are used with different brand transmitters and transceivers. A suitable type, which is the counterpart of the output connector on your transmitter or transceiver, is required. Make sure that cable does not get shorted when fitting the connector to the end of the coax feedline.

Strip about a half inch of Insulation from the end of the counterpoise closest to the 10 meter tag. Attach the wire to the large clip. Roll the opposite end of the counterpoise around your hand to form a loop until the desired band marker is reached.

Choose the loading coil or shorting strap for operation on the desired band and screw it to the base. With the large screw, mount the base on the window bracket. Place the whip on the other end of the base and tighten securely.

Extend the whip to full length, clip the counterpoise to the bracket and clamp window bracket to window. If the window is metal, insulate the bracket from the window. Two pieces of cardboard may be used to insulate the bracket.

OPERATION

The antenna is designed to operate in the 40, 20, 15, 10, 6, 2 and CB bands, as follows:

40 Meter band:

Extend counterpoise to approximately full length. A slight adjustment can be made to improve S.W.R. by coiling a turn or two of the counterpoise around the hand. For the CB, 20, 15, 10 continue coiling the wire to approximate marked lengths for the desired bands.

20 Meter band:

Roll up the counterpoise to the 20 meter marker, around the hand. Attach 20 meter coil to base, whip extended full length.

15 Meter band:

Roll up counterpoise to 15 meter marker. Attach 15 meter coil to base, whip extended full length

10 Meter band:

Roll up counterpoise to 10 meter marker. Attach 10 meter coil to base, whip full length.

CB band:

Roll up counterpoise to 11 meter marker. Attach CB coil to base, whip full length.

6 Meter band:

Remove counterpoise. Attach shorting strap to base, whip full length. Ground window bracket.

2 Meter band:

Remove counterpoise. Attach shorting strap to base. Extend whip to 54". Do not ground window bracket.

OPERATING TIPS

For motel operation, the counterpoise may be laid on the floor. Best results will be obtained with the counterpoise at right angle to the antenna.

For rooms above the ground floor, slight improvement in operation can sometimes be noted by hanging the counterpoise, as close to the wall as possible.

For operation on a boat where the deck is metal, the counterpoise will have to be stretched two or three feet above the deck.

For those desiring optimum adjustment, the use of an SWR bridge is recommended. When using a bridge, the antenna is tuned by changing the length and/or position of the counterpoise until the lowest possible SWR reading is achieved. (The counterpoise length is changed by winding or unwinding the coil which is normally kept at hand size.)

COUNTERPOISE LENGTHS

These lengths are approximate and will change at different locations for a 1 to 1 match:

40 meters --- 33 ft.
20 meters --- 14 ft. 7 in. (Phone band)
15 meters --- 9 ft. 6 in. (Phone band)
10 meters --- 44 in. (Phone band)
CB band --- 55 in.

For operation in the CW bands unwind about two additional turns of counterpoise.

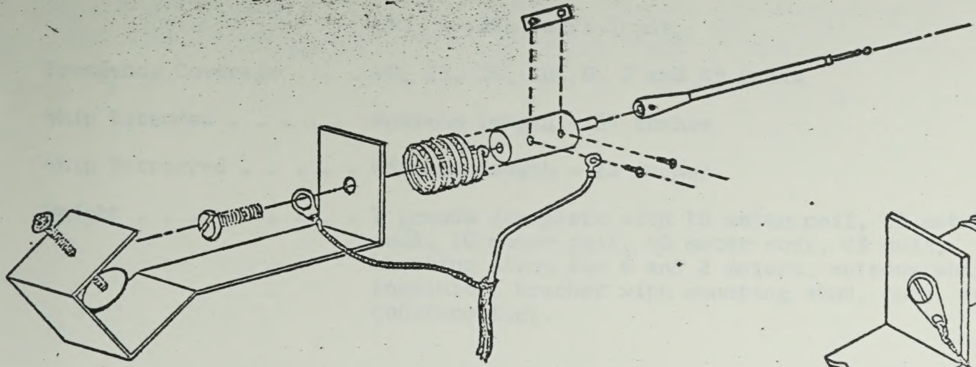


FIGURE 1

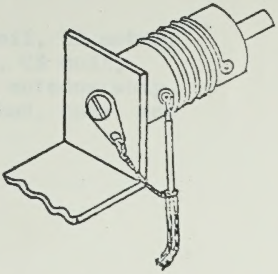
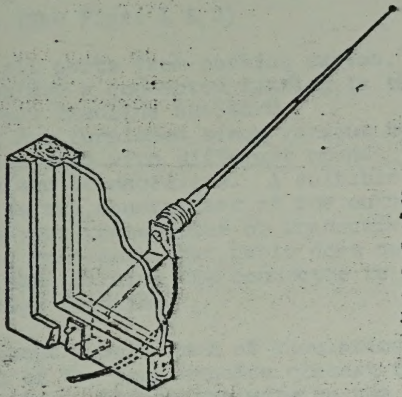


FIGURE 2

PORTABLE WHIP ANTENNA



MODEL 370-10
2 - 40 METER ANTENNA AND CB FREQUENCIES

Simple installation for Apartments, Town Houses, Trailers, Boats, Hotels, etc. The Model 370-10 has proven its ability to provide a quick and dependable antenna system when regular antennas cannot be used.

The Model 370-10 has also found application for emergency communication work when conventional antenna systems have been put put of service through storm damage, etc. When adjusted properly to your operating frequency, VSWR is 1.1:1.

SPECIFICATIONS:

Power Rating	SSB -- 360 watts PEP
	CW -- 360 watts input
Frequency Coverage . . .	40, 20, 15, 10, 6, 2 and CB Bands
Whip Extended	Maximum length - 57 inches
Whip Retracted	Minimum length - 23 inches
Weight	2 pounds (complete with 10 meter coil, 15 meter coil, 20 meter coil, 40 meter coil, CB coil, shorting strap for 6 and 2 meters, antenna whip, insulator, bracket with mounting stud, coax, and counterpoise).

BARKER & WILLIAMSON, INC.

BRISTOL, PENNSYLVANIA 19007

Installation (See Figs. 1 & 2)

Remove all parts from packing carton. Attach and solder a connector fitting to the end of the coax feedline RG-58A/U. Connector is not furnished since various type connectors are used with different brand transmitters and transceivers. A suitable type, which is the counterpart of the output connector on your transmitter or transceiver, is required. Make sure that cable does not get shorted when fitting the connector to the end of the coax feedline.

Strip about a half inch of Insulation from the end of the counterpoise closest to the 10 meter tag. Attach the wire to the large clip. Roll the opposite end of the counterpoise around your hand to form a loop until the desired band marker is reached.

Choose the loading coil or shorting strap for operation on the desired band and screw it to the base. With the large screw, mount the base on the window bracket. Place the whip on the other end of the base and tighten securely.

Extend the whip to full length, clip the counterpoise to the bracket and clamp window bracket to window. If the window is metal, insulate the bracket from the window. Two pieces of cardboard may be used to insulate the bracket.

OPERATION

The antenna is designed to operate in the 40, 20, 15, 10, 6, 2 and CB bands, as follows:

40 Meter band:

Extend counterpoise to approximately full length. A slight adjustment can be made to improve S.W.R. by coiling a turn or two of the counterpoise around the hand. For the CB, 20, 15, 10 continue coiling the wire to approximate marked lengths for the desired bands.

20 Meter band:

Roll up the counterpoise to the 20 meter marker, around the hand. Attach 20 meter coil to base, whip extended full length.

15 Meter band:

Roll up counterpoise to 15 meter marker. Attach 15 meter coil to base, whip extended full length.

10 Meter band:

Roll up counterpoise to 10 meter marker. Attach 10 meter coil to base, whip full length.

CB band:

Roll up counterpoise to 11 meter marker. Attach CB coil to base, whip full length.

6 Meter band:

Remove counterpoise. Attach shorting strap to base, whip full length. Ground window bracket.

2 Meter band:

Remove counterpoise. Attach shorting strap to base. Extend whip to 54". Do not ground window bracket.

OPERATING TIPS

For motel operation, the counterpoise may be laid on the floor. Best results will be obtained with the counterpoise at right angle to the antenna.

For rooms above the ground floor, slight improvement in operation can sometimes be noted by hanging the counterpoise, as close to the wall as possible.

For operation on a boat where the deck is metal, the counterpoise will have to be stretched two or three feet above the deck.

For those desiring optimum adjustment, the use of an SWR bridge is recommended. When using a bridge, the antenna is tuned by changing the length and/or position of the counterpoise until the lowest possible SWR reading is achieved. (The counterpoise length is changed by winding or unwinding the coil which is normally kept at hand size.)

COUNTERPOISE LENGTHS

These lengths are approximate and will change at different locations for a 1 to 1 match:

40 meters --- 33 ft.
20 meters --- 14 ft. 7 in. (Phone band)
15 meters --- 9 ft. 6 in. (Phone band)
10 meters --- 44 in. (Phone band)
CB band --- 55 in.

For operation in the CW bands unwind about two additional turns of counterpoise.

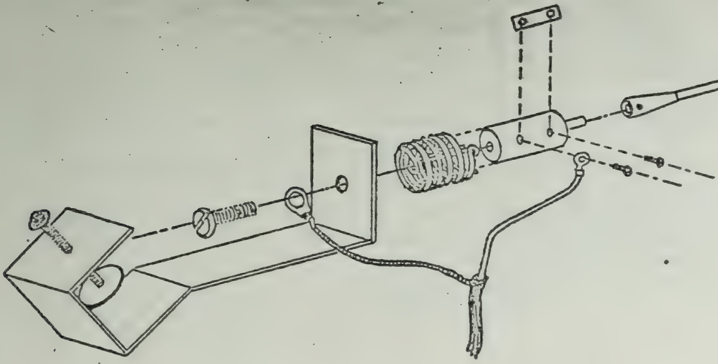


FIGURE 1

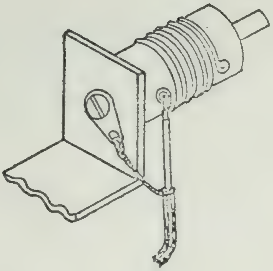
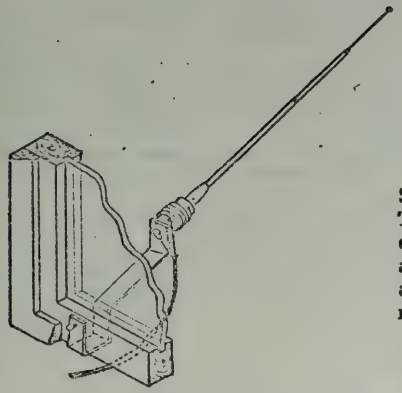


FIGURE 2

PORTABLE WHIP ANTENNA



MODEL 370-10
2 - 40 METER ANTENNA AND CB FREQUENCIES

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The Model 370-10 has also found application for emergency communication work when conventional antenna systems have been put put of service through storm damage, etc. When adjusted properly to your operating frequency, VSWR is 1.1:1.

SPECIFICATIONS:

Power Rating	SSB -- 360 watts PEP
	CW -- 360 watts input
Frequency Coverage . . .	40, 20, 15, 10, 6, 2 and CB Bands
Whip Extended	Maximum length - 57 inches
Whip Retracted	Minimum length - 23 inches
Weight	2 pounds (complete with 10 meter coil, 15 meter coil, 20 meter coil, 40 meter coil, CB coil, shorting strap for 6 and 2 meters, antenna whip, insulator, bracket with mounting stud, coax, and counterpoise).

BARKER & WILLIAMSON, INC.

BRISTOL, PENNSYLVANIA 19007

Installation (See Figs. 1 & 2)

Remove all parts from packing carton. Attach and solder a connector fitting to the end of the coax feedline RG-58A/U. Connector is not furnished since various type connectors are used with different brand transmitters and transceivers. A suitable type, which is the counterpart of the output connector on your transmitter or transceiver, is required. Make sure that cable does not get shorted when fitting the connector to the end of the coax feedline.

Strip about a half inch of Insulation from the end of the counterpoise closest to the 10 meter tag. Attach the wire to the large clip. Roll the opposite end of the counterpoise around your hand to form a loop until the desired band marker is reached.

Choose the loading coil or shorting strap for operation on the desired band and screw it to the base. With the large screw, mount the base on the window bracket. Place the whip on the other end of the base and tighten securely.

Extend the whip to full length, clip the counterpoise to the bracket and clamp window bracket to window. If the window is metal, insulate the bracket from the window. Two pieces of cardboard may be used to insulate the bracket.

OPERATION

The antenna is designed to operate in the 40, 20, 15, 10, 6, 2 and CB bands, as follows:

40 Meter band:

Extend counterpoise to approximately full length. A slight adjustment can be made to improve S.W.R. by coiling a turn or two of the counterpoise around the hand. For the CB, 20, 15, 10 continue coiling the wire to approximate marked lengths for the desired bands.

20 Meter band:

Roll up the counterpoise to the 20 meter marker, around the hand. Attach 20 meter coil to base, whip extended full length.

15 Meter band:

Roll up counterpoise to 15 meter marker. Attach 15 meter coil to base, whip extended full length.

10 Meter band:

Roll up counterpoise to 10 meter marker. Attach 10 meter coil to base, whip full length.

CB band:

Roll up counterpoise to 11 meter marker. Attach CB coil to base, whip full length.

6 Meter band:

Remove counterpoise. Attach shorting strap to base, whip full length. Ground window bracket.

2 Meter band:

Remove counterpoise. Attach shorting strap to base. Extend whip to 54". Do not ground window bracket.

OPERATING TIPS

For motel operation, the counterpoise may be laid on the floor. Best results will be obtained with the counterpoise at right angle to the antenna.

For rooms above the ground floor, slight improvement in operation can sometimes be noted by hanging the counterpoise, as close to the wall as possible.

For operation on a boat where the deck is metal, the counterpoise will have to be stretched two or three feet above the deck.

For those desiring optimum adjustment, the use of an SWR bridge is recommended. When using a bridge, the antenna is tuned by changing the length and/or position of the counterpoise until the lowest possible SWR reading is achieved. (The counterpoise length is changed by winding or unwinding the coil which is normally kept at hand size.)

COUNTERPOISE LENGTHS

These lengths are approximate and will change at different locations for a 1 to 1 match:

40 meters --- 33 ft.
20 meters --- 14 ft. 7 in. (Phone band)
15 meters --- 9 ft. 6 in. (Phone band)
10 meters --- 44 in. (Phone band)
CB band --- 55 in.

For operation in the CW bands unwind about two additional turns of counterpoise.

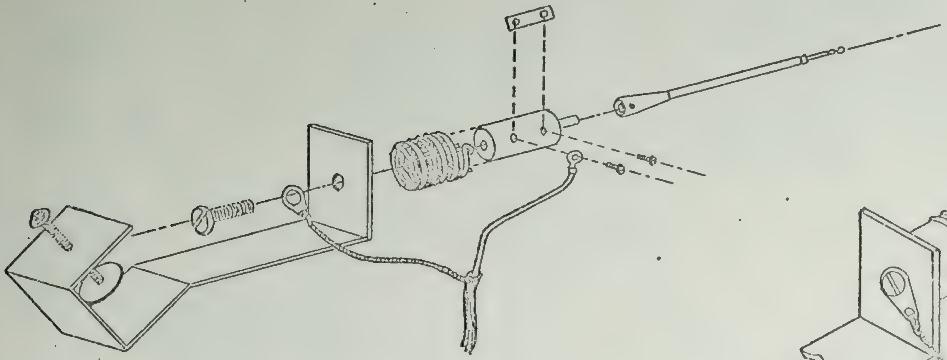


FIGURE 1

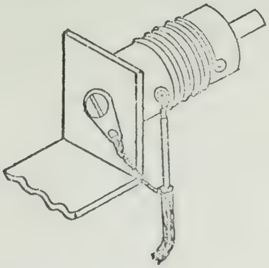
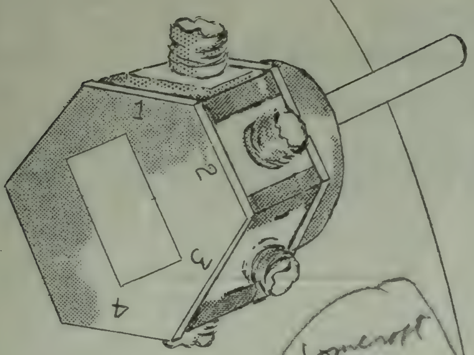
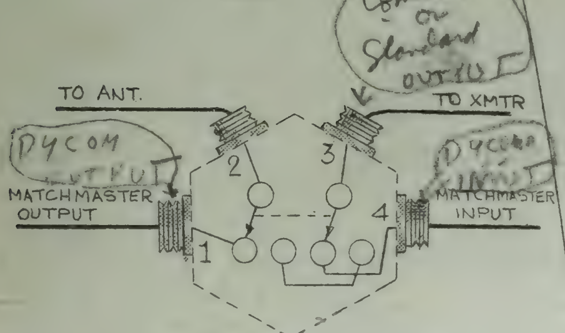


FIGURE 2

MODEL 551A COAXIAL SWITCH

B&W





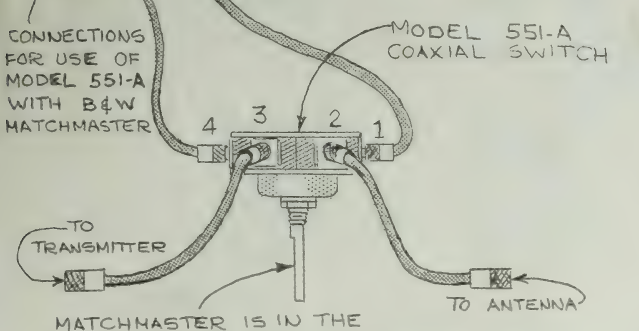
SCHEMATIC DIAGRAM
(BACK VIEW)

THE B&W MODEL 551A COAX SWITCH IS A TWO POLE TWO POSITION SPECIAL PURPOSE COAX TYPE SWITCH. IT IS USED FOR SWITCHING VARIOUS DEVICES IN OR OUT OF SERIES CONNECTION WITH EITHER 52 OR 75 OHM COAXIAL LINES.

SOME OF ITS USEFUL PURPOSES ARE THE SWITCHING IN OR OUT OF THE B&W MATCHMASTER OR OTHER SIMILAR DEVICES. ANTENNA CURRENT METERS AND TUNING NETWORKS MAY ALSO BE CUT IN OR OUT OF THE LINE AT WILL AS REQUIRED IN VARIOUS APPLICATIONS.

A TYPICAL EXAMPLE OF ITS USE IN CONJUNCTION WITH THE B&W MATCHMASTER IS ILLUSTRATED ON THIS SHEET. CARE MUST BE EXERCISED IN CONNECTING THE INPUT AND OUTPUT TERMINALS OF THE SWITCH TO THE APPROPRIATE TERMINALS OF THE DEVICE TO BE SWITCHED IN AND OUT OF THE LINE. THE ILLUSTRATION AND CIRCUIT DRAWING PROVIDE AN EXCELLENT GUIDE AND SHOULD BE CLOSELY FOLLOWED.

THE MODEL 551A MAY ALSO BE UTILIZED TO SWITCH LOW IMPEDANCE COUPLED POWER AMPLIFIERS IN OR OUT OF THE CIRCUIT AT WILL, THUS PERMITTING THE DRIVER STAGE TO BE CONNECTED TO A LOW IMPEDANCE ANTENNA CIRCUIT OR OTHER SIMILAR LOAD AS DESIRED.



TO DISCONNECT MATCHMASTER AND CONNECT ANTENNA DIRECTLY TO TRANSMITTER, TURN CONTROL SHAFT TO MAXIMUM CLOCKWISE POSITION.

CONNECTIONS FOR USE OF MODEL 551-A WITH B&W MATCHMASTER

MATCHMASTER IS IN THE CIRCUIT, WHEN FLAT OF CONTROL SHAFT IS IN A MAXIMUM COUNTER-CLOCKWISE POSISTION

MODEL 551A

$7.95 NET PRICE

BARKER & WILLIAMSON, INC.
237 FAIRFIELD AVE. UPPER DARBY, PA.

BARKER & WILLIAMSON, INC.

BRISTOL, PENNA. 19007

MODEL 595 COAXIAL SWITCH

The Barker & Williamson Model 595 Coaxial Switch is designed to provide a convenient method of selecting appropriate antennas in receiving and transmitting services at frequencies up to 150 MHz. Automatic grounding, of unused positions, is incorporated in the Model 595, offering protection to receivers and transmitters from transients on the antennas or transmission lines. A ground wire should be hooked to the switch and attached to the system ground in the station.

SPECIFICATIONS

FUNCTION:	Double Pole - 6 position NOTE: The second pole is used to accomplish the grounding function
Power Rating:	1000 watts
Current Rating:	5 Amperes
Voltage:	600 Volts
VSWR @ 50 ohms:	Less than 1.3 to 150 MHz
Insertion Loss:	Negligible
Cross Talk:	Negligible

INSTALLATION:

Wall or desk mounting is available with the Barker & Williamson Model 595 Coaxial Switch. For wall mounting, remove the four (4) screws holding cover assembly. This will allow you to mount the bottom assembly to a suitable wall location using the two (2) holes already punched in the bottom assembly. Next replace top cover assembly. The white pads may be used to mark your own functions using a pencil, India Ink, or typewritten labels. Position one (1) is on the upper right corner (one o'clock position) looking at the switch with connectors facing the top. Switch positions continue in a clockwise format. Input connectors are marked for the appropriate switch positions. "C" is the common.

BARKER & WILLIAMSON, INC.

BRISTOL, PENNA. 19007

MODEL 595 COAXIAL SWITCH

The Barker & Williamson Model 595 Coaxial Switch is designed to provide a convenient method of selecting appropriate antennas in receiving and transmitting services at frequencies up to 150 MHz. Automatic grounding, of unused positions, is incorporated in the Model 595, offering protection to receivers and transmitters from transients on the antennas or transmission lines. A ground wire should be hooked to the switch and attached to the system ground in the station.

SPECIFICATIONS

FUNCTION:	Double Pole - 6 position NOTE: The second pole is used to accomplish the grounding function
Power Rating:	1000 watts
Current Rating:	5 Amperes
Voltage:	600 Volts
VSWR @ 50 ohms:	Less than 1.3 to 150 MHz
Insertion Loss:	Negligible
Cross Talk:	Negligible

INSTALLATION:

Wall or desk mounting is available with the Barker & Williamson Model 595 Coaxial Switch. For wall mounting, remove the four (4) screws holding cover assembly. This will allow you to mount the bottom assembly to a suitable wall location using the two (2) holes already punched in the bottom assembly. Next replace top cover assembly. The white pads may be used to mark your own functions using a pencil, India Ink, or typewritten labels. Position one (1) is on the upper right corner (one o'clock position) looking at the switch with connectors facing the top. Switch positions continue in a clockwise format. Input connectors are marked for the appropriate switch positions. "C" is the common.

Instruction Bulletin

PROTAX^{TM} R.F. COAXIAL ANTENNA SELECTOR SWITCHES

MODELS 375 and 376

Barker & Williamson PROTAX R. F. Coaxial Antenna Selector Switches are designed to provide a convenient method for selecting appropriate antennas in receiving and transmitting service at frequencies up to 150 megacycles. The new PROTAX design incorporated in these switches permits automatic grounding of unused antennas, thus offering a degree of protection to receivers, transmitters, etc., from transients on the antenna or transmission line.

All models of PROTAX Antenna Selector Switches are built in sealed metal cases. The Models 375 and 376 are intended for mounting behind panels up to ¼" thickness. The Model 376, with its radial connectors, may also be mounted by means of the furnished bracket to a wall. All switches are furnished with appropriate self-marking escutcheon plates, molded plastic knob, and necessary mounting hardware. The connectors on Barker & Williamson PROTAX Antenna Selector Switches are type SO-239, commonly known as U.H.F. type, and made with the male cable connector, type PL-259. All switches are marked with either a schematic diagram of the switch or with terminal numbers corresponding to positions on the escutcheon plates. Since all switches are mounted in sealed cases, they are not expected to be serviced in the field. All internal conductors and current carrying metal switch parts are silver plated and ceramic insulated.

A heavy solder lug is furnished with each PROTAX switch to which the user should attach a length of heavy copper braid, the other end of which should be connected to the system ground in the station.

SPECIFICATIONS

Mechanical	**Model 375**	**Model 376**
Terminals:	Axial	Radial
Diameter:	4 1/8" max.	4" over connectors
Length:	2 3/8" behind panel	2" behind panel
Shaft Length:	7/16"	7/16"
Function:	*Double Pole - 6 position	*Double Pole - 5 position
Finish:	...............All Models: Electro-tin plated steel...............	
Weight:	13 oz.	13 1/8 oz.

*Note: The second pole of each of these switches is used to accomplish the grounding function.

Electrical (All Models)

Power Rating (max.)	**1,000 watts
Current Rating (max.)	**5 amperes
Voltage Rating (max.)	500 volts R.M.S.
VSWR at 50 ohms	Less than 1.3 to 150 Mc.
Insertion Loss	Negligible
Cross Talk	Negligible

**The current and power ratings are steady-state maximum values. In transmitting application, it is not intended to operate the switches while transmitter is in operation.

INSTALLATION

Select location on panels for the switch using the escutcheon plate as a template. If you are mounting more than one switch on the panel, keep in mind that while the escutcheon plates for all switches are the same size, the diameter of the switches differ; e.g., the Model 375 is 4 1/8" maximum and the Model 376 is 4" in diameter over connectors, but additional clearance should be allowed for cables and connectors. From the escutcheon plate, mark and drill four holes in the panel; three 7/32" or #8 drill holes for the mounting screws, and one center hole, 13/32". Remove center nut and lockwasher (3/8"). Insert switch in panel from behind. Place the escutcheon plate over shaft and bushing and install 3/8" nut and lockwasher finger tight. Rotate switch body and escutcheon for correct orientation (label stamp on top side of case), and insert three #10 Phillips screws and lockwashers through panel and escutcheon. Tighten all screws and install knob. The white pads on the plate may be used to mark your own functions using pencil, India Ink, or typewritten labels. Markings can be protected by applying new type "Magic" Scotch Brand tape over each pad.

OPERATION AND APPLICATION NOTES

The PROTAX grounding feature of these switches is intended to offer a degree of protection to your receiver or transmitter from transient voltages that may be picked up on the antenna. A prerequisite for satisfactory operation and protection is a good ground connection from the body of the switch to the system ground in the station. It is not recommended that you depend upon the shielding of the coaxial cables for this ground. We recomment the use of a tinned copper braided lead, such as Belden 8661.

While the PROTAX grounding feature is of value in protecting your equipment, no guarantee can be made that, in the event of a direct lightning strike on your antenna system, the equipment will be completely safe from damage. In the case of a direct lightning strike, it is expected that the switch will be destroyed beyond repair.

In the Model 375 Axial Terminal Switch, all terminals, **except** the one in use, are grounded **and** shorted together.

In the Model 376 Radial Terminal 5-position switch, there are six mechanical switch positions. When equipment is not in use, turn knob to the 6th position (marked ⏚), and all antennas are grounded and shorted together.

For applications of antenna selection where grounding of unused antennas is not desired, standard Barker & Williamson selector switches are available.

BARKER & WILLIAMSON, INC.
BRISTOL, PENNSYLVANIA 19007

Instruction Bulletin

PROTAX™ R.F. COAXIAL ANTENNA SELECTOR SWITCHES

MODELS 375 and 376

Barker & Williamson PROTAX R. F. Coaxial Antenna Selector Switches are designed to provide a convenient method for selecting appropriate antennas in receiving and transmitting service at frequencies up to 150 megacycles. The new PROTAX design incorporated in these switches permits automatic grounding of unused antennas, thus offering a degree of protection to receivers, transmitters, etc., from transients on the antenna or transmission line.

All models of PROTAX Antenna Selector Switches are built in sealed metal cases. The Models 375 and 376 are intended for mounting behind panels up to ¼" thickness. The Model 376, with its radial connectors, may also be mounted by means of the furnished bracket to a wall. All switches are furnished with appropriate self-marking escutcheon plates, molded plastic knob, and necessary mounting hardware. The connectors on Barker & Williamson PROTAX Antenna Selector Switches are type SO-239, commonly known as U.H.F. type, and made with the male cable connector, type PL-259. All switches are marked with either a schematic diagram of the switch or with terminal numbers corresponding to positions on the escutcheon plates. Since all switches are mounted in sealed cases, they are not expected to be serviced in the field. All internal conductors and current carrying metal switch parts are silver plated and ceramic insulated.

A heavy solder lug is furnished with each PROTAX switch to which the user should attach a length of heavy copper braid, the other end of which should be connected to the system ground in the station.

SPECIFICATIONS

Mechanical	**Model 375**	**Model 376**
Terminals:	Axial	Radial
Diameter:	4 1/8" max.	4" over connectors
Length:	2 3/8" behind panel	2" behind panel
Shaft Length:	7/16"	7/16"
Function:	*Double Pole - 6 position	*Double Pole - 5 position
Finish:	...............All Models: Electro-tin plated steel...............	
Weight:	13 oz.	13 1/8 oz.

*Note: The second pole of each of these switches is used to accomplish the grounding function.

Electrical (All Models)

Power Rating (max.)	**1,000 watts
Current Rating (max.)	**5 amperes
Voltage Rating (max.)	500 volts R.M.S.
VSWR at 50 ohms	Less than 1.3 to 150 Mc.
Insertion Loss	Negligible
Cross Talk	Negligible

**The current and power ratings are steady-state maximum values. In transmitting application, it is not intended to operate the switches while transmitter is in operation.

INSTALLATION

Select location on panels for the switch using the escutcheon plate as a template. If you are mounting more than one switch on the panel, keep in mind that while the escutcheon plates for all switches are the same size, the diameter of the switches differ; e.g., the Model 375 is 4 1/8" maximum and the Model 376 is 4" in diameter over connectors, but additional clearance should be allowed for cables and connectors. From the escutcheon plate, mark and drill four holes in the panel; three 7/32" or #8 drill holes for the mounting screws, and one center hole, 13/32". Remove center nut and lockwasher (3/8"). Insert switch in panel from behind. Place the escutcheon plate over shaft and bushing and install 3/8" nut and lockwasher finger tight. Rotate switch body and escutcheon for correct orientation (label stamp on top side of case), and insert three #10 Phillips screws and lockwashers through panel and escutcheon. Tighten all screws and install knob. The white pads on the plate may be used to mark your own functions using pencil, India Ink, or typewritten labels. Markings can be protected by applying new type "Magic" Scotch Brand tape over each pad.

OPERATION AND APPLICATION NOTES

The PROTAX grounding feature of these switches is intended to offer a degree of protection to your receiver or transmitter from transient voltages that may be picked up on the antenna. A prerequisite for satisfactory operation and protection is a good ground connection from the body of the switch to the system ground in the station. It is not recommended that you depend upon the shielding of the coaxial cables for this ground. We recomment the use of a tinned copper braided lead, such as Belden 8661.

While the PROTAX grounding feature is of value in protecting your equipment, no guarantee can be made that, in the event of a direct lightning strike on your antenna system, the equipment will be completely safe from damage. In the case of a direct lightning strike, it is expected that the switch will be destroyed beyond repair.

In the Model 375 Axial Terminal Switch, all terminals, **except** the one in use, are grounded **and** shorted together.

In the Model 376 Radial Terminal 5-position switch, there are six mechanical switch positions. When equipment is not in use, turn knob to the 6th position (marked ⏚), and all antennas are grounded and shorted together.

For applications of antenna selection where grounding of unused antennas is not desired, standard Barker & Williamson selector switches are available.

BARKER & WILLIAMSON, INC.
BRISTOL, PENNSYLVANIA 19007

BARKER & WILLIAMSON LOW PASS FILTERS
MODELS FL10/1500 & FL10/1500/70
FREQUENCY RANGE 1.5 to 30 MHz
(Formerly 425 & 426)

INSTALLATION INSTRUCTIONS

B&W Low Pass Filters FL10/1500 & FL10/1500/70 are designed to handle 1.5 KW* of RF power and can be used to effectively attenuate harmonic and spurious frequencies normally reaching the antenna via the feed line system, resulting in Television (TVI) and Radio Frequency Interference (RFI).

Model Number	Applications	Cut-Off Freq. (MHz)	Max. Atten. Freq. (MHz)	Min. Atten. (dB)	Impedance (ohms)	Power Rating
FL10/1500	Amateur bands below 30 MHz and	34	52	70	50	1500 watts*
FL10/1500/70	CB @ 27 MHz	34	52	70	70	1500 watts*

While both models are designed for use with unbalanced coaxial type feed lines, they can be successfully used with a balanced two wire feed line system through a standard type parallel tuned antenna coupler or a balun impedance matching unit. In both instances the Low Pass Filter is inserted in a short interconnecting section of coax line of appropriate impedance between the unbalanced output of the transmitter and the antenna coupler or the balun impedance matching unit as the case may be.

When the Filter is used without an antenna coupler or balun impedance matching unit, it should be connected directly to the unbalanced output of the transmitter, without any interconnecting lead if possible. In the event a connecting length of coax cable is needed for connecting the filter to the output of the transmitter, it should be as short as possible.

Line reactance may be balanced out with a reactance tuning capacitor when the reactance has been determined to be inductive, on the other hand, a coil may be required when the reactance is capacitive. A combination of series coil and capacitor, instead of either a capacitor or a coil, will allow greater flexibility and ease of adjustment in many conditions encountered. Although the Filter has been designed to tolerate a reasonable degree of mismatch without impairing its performance, a close match is desirable whenever possible.

CAUTION

1. All preliminary tune-up when the Filter is first installed, should be at reduced power. These units are not to be used on frequencies higher than 30 MHz.
2. Do not attempt to operate transmitter when the feed line is disconnected from the filter or in such a manner which leaves the filter "open ended" and exposed to the power output without an appropriate load. Do not use Low Pass Filters in tuned antenna feed line systems.
3. Be sure and bond the Filter to the common transmitter ground connections and transmitter case, and then to a good earth connection.

For those who are unfamiliar with the details on how to minimize TVI and RFI, information on the subject will be found in the ARRL Amateur's Handbook.

WARRANTY

Barker & Williamson guarantees each product to be free from defects in material and workmanship for 90 days from date of purchase. The warranty applies to the original purchaser only and we will repair or replace the product at our discretion. Warranty is voided if product is subjected to misuse, neglect, accident, improperly installed or used in violation of the instructions furnished by us. Barker & Williamson reserves the right to make improvements and change in design at any time without obligation to update previously manufactured models. This warranty is given in lieu of any other warranty, expressed or implied.

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*Intermittent Commercial and Amateur Service

Barker & Williamson
10 Canal Street
Bristol, Pennsylvania 19007
215-788-5581

manuals attached

Low-Pass Filter

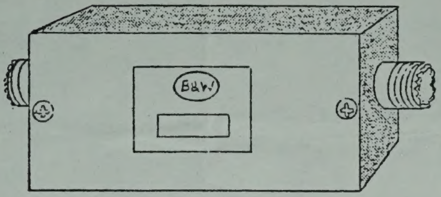
Dummy Load

Coax Switch Connector

Code Practice Oscillator

BARKER & WILLIAMSON LOW PASS FILTER
FL10/100
(Formerly 424)

INSTALLATION INSTRUCTIONS



The B&W Model FL10/100 Low Pass Filter has been designed to effectively reduce TVI when used with low power amateur and citizens band transmitting equipment. When properly installed in accordance with instructions, radiated spurious and other undesirable signals higher than 53 MHz and related harmonics appearing in the TV and FM bands or other channels, are attenuated by at least 50 dB (a reduction of one hundred thousand times.) It may also be used between a low power exciter and a high power amplifier to reduce introduction of spurious frequencies to the input of the amplifier.

The design consists of 3 sections using one "M" derived section on each end and a constant "K" section in the center. The unit is reversible, therefore, either end will serve as the input or output. See reverse side of this sheet for typical installation ideas.

NOTE: Not recommended for use with transmitted frequencies higher than 30 MHz.

SPECIFICATIONS

Power Rating:	100 Watts*
Frequency Range:	1.5 to 30 MHz.
Attenuation:	Min. of 50 dB from 53 MHz. through the TV and FM channels.
Impedance:	52/75 ohms (reversible).
Connectors:	Two UHF type SO-239.
Size:	5" x 2" x 1-3/4".
Weight:	Net 7 oz., Shipping 1.5 lbs.

*Intermittent Commercial and Amateur Service

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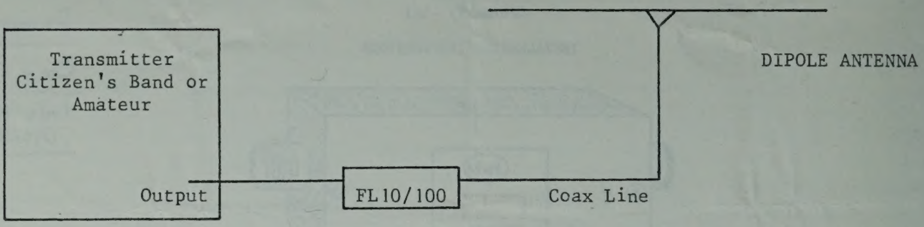
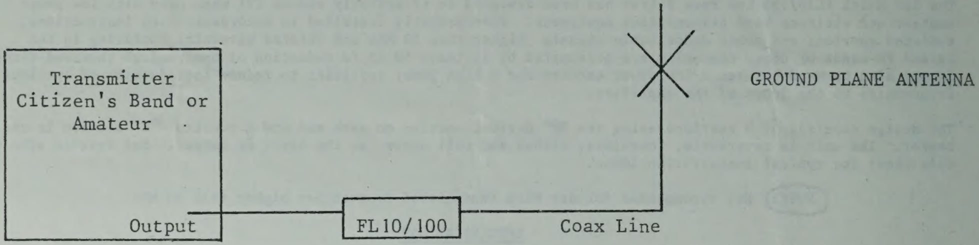
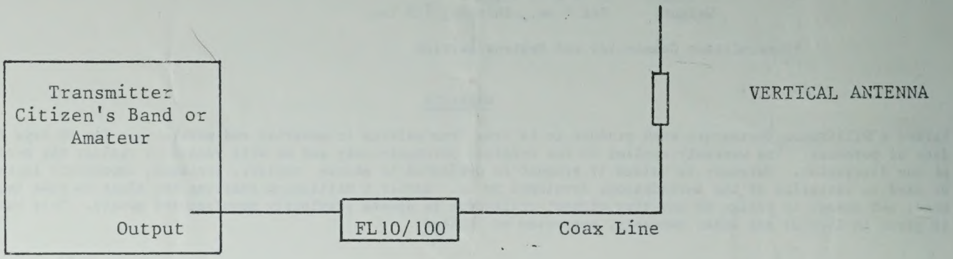
TYPICAL INSTALLATIONS







EXCITER - FINAL APPLICATION